INDEX **Page no**

1. Introduction_____1

2. Review of Literature_____6

3. Research Methodology_____8

3.1 Introduction

3.2 Research Statement

3.3 Research design

3.4 Objectives of Study

3.5 Nature of Data and Sources of Data

3.6 Sample selection

3.7 Hypothesis

3.8 Tools for data collection

4. Scope and limitation of the study_____12

4.1 Scope of the Study

4.2 Limitation of the Study

5. Lay out of the study_____13

Bibliography

1. INTRODUCTON

1.1 Indian Sugar Industry

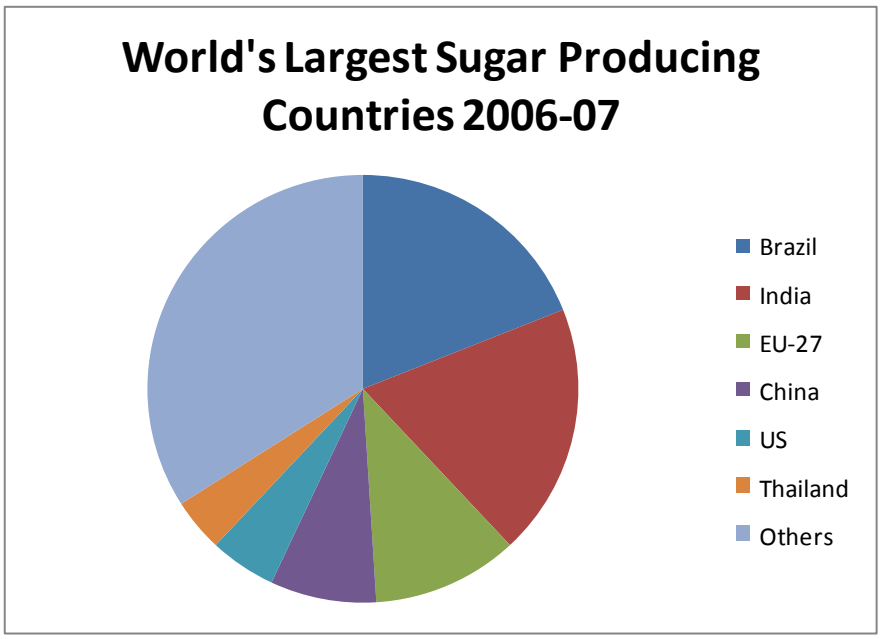
India is known as the original home of sugar and sugarcane. In global sugar economy, the Indian Sugar Industry has achieved a number of milestones. It is the second largest producer of sugar in the world. This industry is the second largest agro processing industry in India after textile. More than 500 thousand people are directly employed. More than 45 million people in the rural population of India depend on Sugar Industry for their livelihood. Its contribution to the central and state exchequers is of high order. The Indian Sugar Industry has been accounting for around 1% of GDP of the country in the recent past.

Sugar production in India is concentrated in six states namely Maharashtra, Uttar Pradesh, Gujarat, Tamil Nadu, Karnataka and Andhra Pradesh which together account for 85-90% of sugar production in the country. The Indian Sugar Industry is highly fragmented with over 450 mills and no single player having a market share of over 5%. Around 60% of the mills are in the cooperative sector, 35% in the private and the rest are in public sector. The sugar industry can be broadly classified into two sub-sectors, the organized sector i.e. sugar factories, and the unorganized sector i.e. manufacturers of traditional sweetener like gur and khandsari.

India is the largest consumer of sugar in the world with annual consumption of about 20.40 million mt. It also happens to be the second largest producer of sugar, next to Brazil, with production in the year 2007 with 22.33 million mt. Global production from cane as well as beet is around 170 million mt currently.

About 80% of global sugar production is from sugarcane. It has been clearly established that sugarcane is the cheapest source of sugar; the cost of sugar production through the cane route can be as low as 40% of that of sugar from the sugar beet route. One of the major producers of sugar through the beet route, the EU has already begun cutting down on production realizing the futility of competing with cane.

1.2GLOBAL SCENARIO



Brazil is the largest producer of sugar in the world. Even in 2007, it was the largest producer with 30.34 million mt, followed by India with 20.33 million mt. While in case of world sugar consumption, India ranks higher than Brazil with a consumption of 20.40 million mt.

1.3 INDIAN SUGAR INDUSTRY

The cooperative sector of the sugar industry in India has played a major role in the growth of India's sugar Industry. After independence, the Govt. of India decided to industrialize the country building up a large and growing sector and accordingly the principle of cooperation was assigned an important role for the country's economic development of industries based on agriculture produce such as sugarcane. The Govt. of India gave preference to cooperative sector in licensing of new sugar factories. This policy continued to de licensing of sugar industry in August 1998. As a result of the preferential policy given to cooperatives, the sugar industry progressed by leaps and bounds and the Indian sugar

Industry achieved the distinction of being the world's largest sugar producer during 1988 to 1993 and gain during 1995-96. However, the liberalization of economy in June 1991 the cooperative sector of sugar industry could not expand at the same pace as before because of financial institution's reluctance to grant funds and slowly their growth has come to a grinding halt.

The Indian Sugar Industry is a key driver of rural development supporting over about 55 million sugarcane farmers, their dependants and a large mass of agricultural laborers involved in sugarcane cultivation, harvesting, machine manufacturing etc. of almost 607 sugar mills and ancillary activities, constituting some 7.5 % of the rural population. Besides about 0.5 million skilled and semi-skilled workers, mostly from the rural areas are engaged in the sugar industry.

The bulk of the Indian sugarcane cultivation and hence, location of the sugar mills, is in the states of Uttar Pradesh, Maharashtra, Tamil Nadu, Karnataka, Andhra Pradesh, Gujarat, Punjab, Haryana and Bihar. The annual production is in the range of 300 to 350 million tons of sugarcane out of which about 30% is used for gur and chewing purposes and balance for producing sugar. Sugar production during 2011-12 was a little over 28 million tons second only to Brazil's production of about 33 million tons. Uttar Pradesh with 30% and Maharashtra with 27% of the sugar production top the nine states. While Bihar, Punjab and Haryana are at the other end of the spectrum with less than a million tons of production per annum, the balance states produce in excess of 1 million tons each per annual.

Production growth over the last half century has been a little under 5% Compound Average Growth Rate with typical cycles of 4 to 7 years.

Of the total of about 400 mills in the country, over 60% are either in the cooperative or government sector and the balance of about 40% in the private sector. The states of Maharashtra, Karnataka and Tamil Nadu have relatively larger share of cooperative mills. However, over 50% of the output is accounted for by the private mills and the share of the private sector has been steadily increasing.

The average land holding of cane farmers is very small and fragmented. The bulk of the holdings are reported to fall between 1 and 4 hectares. Around 50 million farmers, including indirect labor are believed to be dependent on this crop. It is also very labor intensive in terms of cutting labor required for harvesting cane. Indian farm productivity ranges from 40 tons per hectare to 110 tons per hectare against the global average of about 64 tons per hectare, however, even within India, states like Tamil Nadu have farms reporting harvests in excess of 120 tons per hectare. Sucrose content wise, it ranges from 9 to 11% with an overall national average of about10%.

The cost of sugarcane is as high as 70% of the value of the sugar produced by the mill, farm productivity and sucrose content of the cane are, hence, critical factors which impinge on the economics of operations. Sugarcane is also highly perishable with the sucrose content dropping drastically beyond 24 hours from the time of cutting. In fact, perhaps owing to the rather un-economical land size and populist pressures Indian cane prices are probably the highest in the world, paradoxically, Indian domestic retail sugar prices are one of the lowest in the world thanks to the paranoid reluctance of the government from letting them rise to their natural levels

Every ton of sugarcane can produce about 100 kg of sugar on an average as also about 45 kg of molasses and 300 kg of bagasse. Alternatively, the sugarcane juice can be converted directly into about 70 liters of alcohol in lieu of the sugar and molasses. The Indian government has now decided to permit millers to convert the sugarcane juice either into sugar and molasses or directly into alcohol.

1.4 Demand

Domestic demand for sugar is about 20 million tons with average annual growth rate of about 3.5% (against the world average of about 2.2%) India is the world's largest consumer of sugar; total global demand is in the region of 160 million tons. Unlike Brazil which exports over 70% of its production, the bulk of India's production is consumed domestically with occasional imports or exports of a few million tons to tide over deficits/surpluses.

Increasing GDP and changing life styles and food habits are driving down the demand for gur in India with a proportionate increase in demand for sugar. About 70 per cent of the sugar demand is from institutions including confectionary units, soft drinks plants, etc. while the rest of the volume is accounted for by households for direct consumption.

Sugar is India's second largest agro-processing industry with around 400 operating mills. The 203 cooperatives are a dominant component of the Industry accounting for over 56% of the total capacity of around 19 mt per annual of sugar. Of the 203 cooperatives nearly 83 (or 41% of total cooperatives) are concentrated in Maharashtra, followed

by UP with 28 mills of the 197 non cooperative and/or private sugar mills nearly 78 (or 40%) are located in UP, followed by TN, AP and Karnataka.

The sugar manufacturing industry is highly fragmented with none of the players having a market share greater than 3%. Although cooperatives account for around 43% of the total production in the sugar industry their share has gradually declined.

Because of the higher number of units in states such as Maharashtra and Gujarat, the cooperatives dominate sugar production in these states. By comparison, private and other sugar mills dominate sugar production in UP, AP, Haryana and TN.

2. REVIEW OF LITERATURE

Indian Sugar Industry – A Comparative Study by Dr. G. A. Nikam (2006) is an attempt to find out cost trend, profitability and operational efficiency of the sugar mills of two states, Uttar Pradesh and Maharashtra. The study also attempts to compare the working of the sugar mills of different regions of Uttar Pradesh and Maharashtra.

Labor Problems and Welfare by M. Mustafa (1990) is a systematic, comprehensive and analytical study of the problems related to mill workers and welfare measures introduced especially in the sugar industry.

Cane Sugar Manufacturing by Ram Bihari Mathur deals comprehensively with the practical aspects of the manufacture of raw and white consumption sugar from sugarcane.

Machinery and Equipment of the Cane Sugar Factory by L. A. Tromp (1936) is a study of all the machinery and equipment used in a cane sugar factory.

Cane Sugar Handbook by Guilford L. Spencer and George P. Meade published by John Wiley and Sons, Inc., London (1945) gives a concise survey of the manufacturing and refining processes, provides selected analytical procedures and reference tables for the control chemist and explains and compare methods of chemical control.

Practical Hints on Sugar Factory Control by Dr. O. P. Talwar (1968**)** deals with measures to remedy unknown losses in sugar industry, raise clarification efficiency, minimize losses by various pan boiling schemes, as well as lower the final molasses purity by high speed electrical centrifugation.

Sugar Cane in India by S. V. Parthaswathy (1972**)** discusses soil, climate, botany of sugarcane, land preparation, seed, planting and Inter-culture, pests and diseases.

Sugar from scarcity to surplus by Hubert (1958) gives factual information on many facets of sugar cane cultivation, irrigation system, construction of factories, old and new equipment, trouble shooting, comparative value of different labour forces, role of chemists in scientific quality control and production efficiency.

Souvenir published by The Sugar Technologists' Association of India, analyses and promotes knowledge of the science and practice of sugar technology and other kindred branches of science. Proceedings published by The Sugar Technologists' Association of India discusses the manufacturing and engineering aspects and different co-products of sugarcane.

The handbook of Sugar Facts and Figures by United States Cuban Sugar Council, New York (1948) has been prepared to promote a wider public understanding of the sugar producing industry in the principal areas supplying the United States market.

Sugar Industry in India by Prof. Ram Vichar Sinha (1988) analyses the historical background of Indian Sugar Industry, agricultural economics of sugarcane, problems of cane marketing and transport, technical performances, utilization of byproducts, labor and relations, policies on sugar economy, fiscal and financial aspects of the industry.

3. RESEARCH METHODOLOGY

3.1 INTRODUCTION

The core concept underlying research is its methodology. The methodology controls the study, dictates the acquisition of the data, and arranges them in logical relationships, sets up a means of refining the raw data, contrives an approach so that the meanings that lie below the surface of those data become manifest, and finally issue a conclusion or series of conclusions that lead to an expansion of knowledge. The entire process is a unified effort as well as an appreciation of its component parts.

According to P.M.Cook, "Research is an honest, exhaustive, intelligent searching for facts and their meanings or implications with reference to a given problem. It is the process of arriving at dependable solutions to problem through planned and systematic collection, analysis and interpretation of data. The best research is that which is reliable, verifiable and exhaustive so that it provides information in which we have confidence."

3.2 RESEARCH STATEMENT

The research statement studied is entitled, **"A Study of Financial Performance of Sugar Industry of Gujarat State during 2002 to 2013"** The present study focuses on the analysis of the financial performance of the Gujarat Sugar Industry with the help of statistical tools like mean, percentage, ratios, ANOVAs.

3.3 RESEARCH DESIGN

A Research design is a plan of action to be carried out in connection with a research project. It is the conceptual structure within which research is conducted and it constitutes the blue print for the collection, measurement and analysis of data. It is the specification of methods and procedures for acquiring the information needed for solving the problem. Decisions regarding what, where, when, how much, by what means concerning an inquiry or a research study constitute a research design.

3.4 OBJECTIVES OF THE STUDY

The objectives of the study are as follows:

- **Main Objective**

- To analyze and evaluate the financial performance of selected Sugar Factories in particular and the Sugar industry in general.

- **Subsidiary Objectives:**

  Subsidiary objectives of the study are as follows:

- To study overall financial health of selected Sugar Factories and sugar industry.

- To study the pattern of growth and development of Sugar industry in Gujarat.

- To make suggestions/comments about the functioning and development of Sugar industry in Gujarat.

3.5 NATURE OF DATA AND SOURCE OF DATA

Collection of the data is essential part of research. The nature of data which is collected and used for this research is secondary in nature. The relevant and required data has been collected from journals, dailies, annual reports, magazines, literature and websites of selected Sugar Co-operatives and through various search engines.

3.6 SAMPLE SELECTION

All Seventeen Sugar Factories have been From Gujarat State selected and compared for their financial performance between the years 2002-03 to 2012-13Sugar Factories selected for the research work are as follows:

1. Sugar Factory, Bardoli
2. Sugar Factory, Gandevi
3. Sugar Factory, Madhi
4. Sugar Factory, Chalthan
5. Sugar Factory, Maroli
6. Sugar Factory, Valsad
7. Sugar Factory, Sayan
8. Sugar Factory, Mahuva
9. Sugar Factory, Ukai
10. Sugar Factory, Vataria
11. Sugar Factory, Kamrej
12. Sugar Factory, Pandvai
13. Sugar Factory, Narmada
14. Sugar Factory, Kopar
15. Sugar Factory, Vadadara
16. Sugar Factory, Talala
17. Sugar Factory, Kodinar

3.7 HYPOTHESIS

In order to achieve the objectives of the study, the following hypothesis are framed:

1. **Ho:** There is no significant difference in the Current ratio of the Sugar Industries in Gujarat State.
2. **Ho:** There is no significant difference in the Return on Capital Employed ratio of the Sugar Industries in Gujarat State.
3. **Ho:** There is no significant difference in the Gross Profit ratio of the Sugar Industries in Gujarat State..
4. **Ho:** There is no significant difference in the Net Profit ratio of the Sugar Industries in Gujarat State

5. **Ho:** There is no significant difference in the Operating profit ratio of the Sugar Industries in Gujarat State.

6. **Ho:** There is no significant difference in the Expenses to Sales Ratio of the Sugar Industries in Gujarat State.
7. **Ho:** There is no significant difference in the Interest Coverage Ratio of the Sugar Industries in Gujarat State.
8. **Ho:** There is no significant difference in the Debt Equity ratio of the Sugar Industries in Gujarat State.
9. **Ho:** There is no significant difference in the Fixed Assets Turnover Ratio of the Sugar Industries in Gujarat State.

3.8 TOOLS AND METHOD OF DATA ANALYSIS

The present study involves calculation of different ratios to evaluate the financial performance of Sugar Industry in Gujarat State Various tools like percentage, mean, ANOVAs, and Ratio analysis are used in this study.

Ratios also provide a bird's eye view of the financial condition of the company. The following ratios have been computed for the present study.

- Current Ratio
- Return on Capital Employed
- Operating profit ratio
- Gross Profit Ratio :
- Net Profit Ratio
- Expenses to Sales Ratio
- Interest Coverage Ratio
- Debt Equity Ratio
- Fixed Assets Turnover Ratio

4. SCOPE AND LIMITATIONS OF THE STUDY

4.1 SCOPE OF THE STUDY

The study is mainly intended to concentrate on the issues relating to the financial Performance of selected units. Financial ratios like Current Ratios, Debt-Equity Ratios, Operating Profit Margin Ratios, Gross Profit Margin Ratios, Net Profit Margin, Return on Capital Employed, Interest Cover Ratios, Fixed Assets Turnover Ratios and Expenses to Sales Ratio has been covered under the present study.

From every research study in the field of commerce some benefits in some way are Derived by certain segments of an industry and the Indian economy in general. This study can also be beneficial to the government, Sugar Manufacturing Association of India, Gujarat state Sugar manufacturing association of Gujarat, state industrial policy makers, Government decision making authority, aspiring entrepreneurs,Students and teachers of commerce and management and researchers etc. This study will serve the following objectives.

- One will have an overview of Sugar industry of Gujarat.
- It will throw light on various aspects relating to financial performance of Sugar industry of Gujarat.
- It will help in judging the overall financial health of selected Sugar manufacturing units and Sugar industry.
- It will help in studying the pattern of growth and development of Sugar manufacturing in Gujarat.
- It studies the trend of Sugar industry in Gujarat.

4.2 LIMITATIONS OF THE STUDY

1. The study is primarily based on a Gujarat Sugar industry only. Therefore, it will have all the limitations normally associated with such studies based on sample information.

2. The sample includes only Co operative Sugar Factories listed on Gujarat State Co op Federation Gandhinagger. As the study is based on the secondary data taken from Published, annual reports, the conclusion of the study depends on the accuracy of such data reported by respective companies.

3. As the study has been carried out for a period of Eleven years only i.e. Financial years 2002-03 to 2012-13 and for the Sugar industry only, For of the study with other similar studies, the factor affecting the respective industry and Indian economy during the respective period must be taken into consideration.

5. LAY OUT OF THE THASIS

- Chapter first on the basis of introduction of sugar industry and historical back ground of it. It presents byproduct of sugar industry and its importance, legal provision for licensing policy of government of India.

- Second Chapter about review of literature in this chapter described short note on published books on sugar industry by different author and thesis submitted by scholars.

- In the third chapter information about research methodology used in this thesis including statement, objectives, nature and resource of data, sample selection.

- The chapter fourth introduction of selected sugar industry in Gujarat state. In this chapter detail of all seventeen sugar factories are given

- Fifth chapter about ratios. its importance limitation and types of ratios given in this chapter.

- Chapter six about analysis of variance of various ratios of sugar industry of Gujarat state among the selected sugar companies during the study period.

- Chapter seven about analysis of variance of various ratios of sugar industry of Gujarat state among the year of selected sugar companies during the study period.

- Chapter eight of trend analysis on the basis of ratios and ANOVAs
- Ninth chapter of conclusion and suggestions on the basis of ratio analysis, trend analysis and ANOVAs.

Bibliography:
References:

1. Agarwal R.N.: ***Sugar Industry of India – My Recollection,*** Popular Prakashan Pvt. Ltd., Bombay 1st Ed., 1976.
2. Ajit Narde ***'Sugar India'*** Year Book 2000-2001 Anekant Prakashan, Jaisingpur, Kolhapur, Maharashtra.
3. Carsberg B.V. & H.C. Edey: ***Modern Financial Management***, Penguin U.K., 1969
4. Choudhary B. Roy: ***Working Capital Management***, Eastern Law House, Calcutta, 1977
5. Cooperative Sugar Directory and Year Book, New Delhi, 1983-84.
6. D.G. Haspte, ***Progressive Sugarcane Farming*** in Maharashtra, Gyanshil Prakashan, Pune, 1996.
7. Darda Rajendra & Others, ***Four Decades of Cooperative Sugar Industry*** (1950-1990), Jai Datta Prakashan,Kolhapur, 1996.

8 .G.A. Nikam, ***'Future of Sugar Co-operatives in India',*** "Co-operative Sugar", June 1993 Vol. 24 No.10 New Delhi.

9.Govt. of India '***Report of the High Power Committee on Sugar Industry, 1998.***'

10 .Gundurao S.N.: ***'Rehabilitation and Modernization of Sugar Factories in India:*** Part I & II, 1965.

11.Gupta L.C.: ***Corporate Management and Accountability towards a Joint Sector;*** Macmillan, Madras, 1974

12.Inamdar N.R.: ***'Government and Cooperative Sugar',*** Popular Prakashan, Bombay.

13.I.S.O. Year Book, ***'Indian Sugar'*** Vol. VIII No. 6, September 2003.114.Kamat G.S.: ***'Management of Cooperative Sugar Factories in Maharashtra:*** Maharashtra Rajya Sahakari Sakhar Karkhana Sangh, Bombay.

15.Karche R.M.: ***'Sugar Cooperatives in Developing Economy,*** Parimal Prakashan, August, 1989.

WEBSITES:

- www.fcamin.nic.in/dfpd
- www.icra.in
- www.indiansugar.com
- www.sugaronline.com
- www.vsisugar.com
- www.staionline.org
- www.isecindia.com
- www.Sugaralliance.org.
- www.fda.gov.
- www.monitorsugar.com
- www.sugar.ind.com
- www.sugar.org